

REMARKS

Claims 1-19 are pending in the present application. Claims 1, 3-17 have been amended as a result of this response. New claims 18 and 19 have been added. Claim 2 has been canceled. Applicants respectfully submit that independent claims 1, 8 and 15 and dependent claims 3-7, 9-14 and 16-19 stand in condition for allowance.

I. Claim Rejections Under 35 U.S.C. § 102(b)

The Examiner has rejected claims 1-6, 8, 15 and 17 under 35 U.S.C. § 102(b) as being anticipated by Yamamoto et al. (U.S. Patent 5,226,298). This rejection is respectfully traversed.

Yamamoto et al. teaches a thermoelectric air conditioner with absorbent heat exchanger surfaces. Yamamoto et al. teaches a flat thermoelectric device, the device having one surface as a heating surface and the other surface as a cooling surface; and flow passages respectively provided for two fluids and which are arranged to intersect with each other while holding the thermoelectric device therebetween (column 2, lines 9-16).

There are a number of embodiments which are described in detail in the specification and shown in the figures which allows the dehumidification unit to maintain dehumidification capability at high levels over a long period of time by pressure-loss reduction. The opening in the cooling element of the present invention may improve the efficiency of heat liberation and the dehumidification capability of the dehumidification unit.

Claim 1 Rejection

The present invention is a dehumidification unit comprising alternate laminations of an adsorption element and a cooling element (paragraph commencing on page 3 line 14 and shown

in Figure 1). The adsorption element supports an adsorbent which consists of a plurality of first air ventilation passages through which air to be processed flows are formed planewise in rows. The cooling element includes of a plurality of second air ventilation passages through which cooling air flows are formed planewise in rows.

Yamamoto et al. does teach a dehumidification unit that is comprised of alternate laminations in which the first layer consists of a plurality of corrugated thermoelectric devices having corrugated fins directed orthogonal to each other (Column 3, lines 10-13). Fluids flow in and out of the devices and are prevented from being mixed (Column 3, lines 23-26). However, Yamamoto et al. fails to teach a dehumidification unit in which the “cooling element is provided, at a planewise inner area thereof, with an opening”. In addition, Yamamoto et al. fails to teach a planewise inner area of a cooling element “with an opening thereby being shaped like a frame”. Also, Yamamoto et al. fails to teach a cooling element wherein a plurality of the “air ventilation passages is divided by said opening into an entry opening and an exit opening situated respectively on one passagewise side and on the other passagewise side thereof.”

Claim 8 Rejection

According to amended claim 8, the cooling element is configured to have a plurality of openings which overlap with air ventilation passages such that the air ventilation passages are each divided passagewise and could even be configured so that the passage direction of the second air ventilation passages on the downstream side of the openings and as viewed in plane view is inclined so as to get closer to the area corresponding to the downstream side of the first air ventilation passages of the adsorption element with approach towards the downstream side.

Yamamoto et al. fails to teach a cooling element that is “provided with openings which overlap with said second air ventilation passages such that said second air ventilation passages are each divided passagewise so as to include an entry opening and an exit opening.” Yamamoto et al. also fails to teach air ventilation passages where “the passage resistance of said second air ventilation passages on the downstream side of said openings is set such that the passage resistance of second air ventilation passages nearer to an area of said cooling element corresponding to the upstream side of said first air ventilation passages of said adsorption element is greater than the passage resistance of second air ventilation passages nearer to an area of said cooling element corresponding to the downstream side of said first air ventilation passages of said adsorption element.”

Claim 15 Rejection

According to amended claim 15, the cooling element is configured to have a plurality of openings which overlap with air ventilation passages such that the air ventilation passages are each divided passagewise and could even be configured so that the passage direction of the second air ventilation passages on the downstream side of the openings and as viewed in plane view is inclined so as to get closer to the area corresponding to the downstream side of the first air ventilation passages of the adsorption element with approach towards the downstream side.

Yamamoto et al. fails to teach a cooling element that is “provided with openings which overlap with said second air ventilation passages such that said second air ventilation passages are each divided passagewise so as to include an entry opening and an exit opening.” Yamamoto et al. also fails to teach a cooling element where “the passage direction of said second air

ventilation passages on the downstream side of said openings as viewed in plane view is inclined so as to get closer to an area of said cooling element corresponding to the downstream side of said first air ventilation passages of said adsorption element with approach towards the downstream side.”

II. Claims Rejections Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 7, 9-12 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto et al. (U.S. Patent 5,226,298) in view of Iacolla (U.S. Patent 5,547,019). Applicant respectfully traverses the rejection.

Iacolla does not remedy the noted deficiencies of Yamamoto et al. Iacolla is only relied upon to teach dependent claim features. This reliance on Iacolla fails to make up for the deficiencies of Yamamoto et al. discussed above with respect to independent claims 1, 8 and 15. Therefore, the asserted combination of Yamamoto et al. and Iacolla (assuming these references may be combined, which Applicant does not admit) fails to establish prima facie obviousness of any pending claim.

Applicant submits that claims 7, 9-12 and 16 are allowable at least by virtue of their dependency on claims 1, 8 and 15. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

III. Conclusion

All matters having been addressed in view of the foregoing, Applicants respectfully request the entry of this Amendment, the Examiner’s reconsideration of this application, and the immediate allowance of all pending claims.

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Reply to Office Action of October 22, 2007

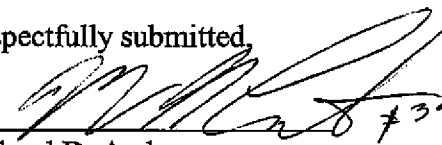
Docket No.: 4633-0130PUS1

Applicants' undersigned representative remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter. If any point remains an issue in which the Examiner feels would be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account No. 02-2448. The Commissioner for Patents is also authorized to credit any overpayments to the above-referenced deposit account.

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Respectfully submitted,

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